RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/788,847A
Source: IFW0
Date Processed by STIC: 12/8/06

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/788,847A **CRF Edit Date:** 12/8/06
Edited by: Le

____ **Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line**

____ **Corrected the SEQ ID NO. Sequence numbers edited were:**

_____

____ **Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:**

_____

✓ **Deleted:** ✓ **invalid beginning/end-of-file text ;** ___ **page numbers**

____ **Inserted mandatory headings/numeric identifiers, specifically:**

_____

____ **Moved responses to same line as heading/numeric identifier, specifically:**

_____

____ **Other:**

_____
_____
_____

Revised 09/09/2003

IFWO

RAW SEQUENCE LISTING DATE: 12/13/2006
PATENT APPLICATION: **US/10/788,847A** TIME: 16:15:05

Input Set : **A:\pto.kd.txt**
Output Set: **N:\CRF4\12132006\J788847A.raw**

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      3 <110> APPLICANT: Nakamura, Yusuke
      4       Furukawa, Yoichi
      6 <120> TITLE OF INVENTION: Gene and Protein Relating to Hepatocellular
Carcinoma and Methods
      7       of Use Thereof
      9 <130> FILE REFERENCE: 25371-021 CIP
     11 <140> CURRENT APPLICATION NUMBER: US 10/788,847A
     12 <141> CURRENT FILING DATE: 2004-02-27
     14 <150> PRIOR APPLICATION NUMBER: PCT/JP02/09876
     15 <151> PRIOR FILING DATE: 2002-09-25
     17 <150> PRIOR APPLICATION NUMBER: US 60/324,261
     18 <151> PRIOR FILING DATE: 2001-09-25
     20 <150> PRIOR APPLICATION NUMBER: US 60/391,666
     21 <151> PRIOR FILING DATE: 2002-06-26
     23 <150> PRIOR APPLICATION NUMBER: CASN 2,399,569
     24 <151> PRIOR FILING DATE: 2002-08-23
     26 <150> PRIOR APPLICATION NUMBER: 60/450,644
     27 <151> PRIOR FILING DATE: 2003-02-28
     29 <160> NUMBER OF SEQ ID NOS: 83
     31 <170> SOFTWARE: PatentIn version 3.2
     33 <210> SEQ ID NO: 1
     34 <211> LENGTH: 1622
     35 <212> TYPE: DNA
     36 <213> ORGANISM: Homo sapiens
     39 <220> FEATURE:
     40 <221> NAME/KEY: CDS
     41 <222> LOCATION: (96)..(1382)
     43 <400> SEQUENCE: 1
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     46 cgggtagccg tctgaggtgc cggagctgcg ggagg atg gag ccg ctg aag gtg       113
     47                                        Met Glu Pro Leu Lys Val
     48                                        1               5
     50 gaa aag ttc gca acc gcc aac agg gga aac ggg ctg cgc gcc gtg acc      161
     51 Glu Lys Phe Ala Thr Ala Asn Arg Gly Asn Gly Leu Arg Ala Val Thr
     52             10                  15                  20
     54 ccg ctg cgc ccc gga gag cta ctc ttc cgc tcg gat ccc ttg gcg tac      209
     55 Pro Leu Arg Pro Gly Glu Leu Leu Phe Arg Ser Asp Pro Leu Ala Tyr
     56         25                  30                  35
     58 acg gtg tgc aag ggg agt cgt ggc gtc gtc tgc gac cgc tgc ctt ctc      257
     59 Thr Val Cys Lys Gly Ser Arg Gly Val Val Cys Asp Arg Cys Leu Leu
     60     40                  45                  50
     62 ggg aag gaa aag ctg atg cga tgc tct cag tgc cgc gtc gcc aaa tac      305
     63 Gly Lys Glu Lys Leu Met Arg Cys Ser Gln Cys Arg Val Ala Lys Tyr
     64 55                  60                  65                  70
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RAW SEQUENCE LISTING DATE: 12/13/2006
PATENT APPLICATION: US/10/788,847A TIME: 16:15:05

Input Set : A:\pto.kd.txt
Output Set: N:\CRF4\12132006\J788847A.raw

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66 tgt agt gct aag tgt cag aaa aaa gct tgg cca gac cac aag cgg gaa      353
67 Cys Ser Ala Lys Cys Gln Lys Lys Ala Trp Pro Asp His Lys Arg Glu
68                  75                  80                  85
70 tgc aaa tgc ctt aaa agc tgc aaa ccc aga tat cct cca gac tcc gtt      401
71 Cys Lys Cys Leu Lys Ser Cys Lys Pro Arg Tyr Pro Pro Asp Ser Val
72              90                  95                 100
74 cga ctt ctt ggc aga gtt gtc ttc aaa ctt atg gat gga gca cct tca      449
75 Arg Leu Leu Gly Arg Val Val Phe Lys Leu Met Asp Gly Ala Pro Ser
76          105                 110                 115
78 gaa tca gag aag ctt tac tca ttt tat gat ctg gag tca aat att aac      497
79 Glu Ser Glu Lys Leu Tyr Ser Phe Tyr Asp Leu Glu Ser Asn Ile Asn
80      120                 125                 130
82 aaa ctg act gaa gat aag aaa gag ggc ctc agg caa ctc gta atg aca      545
83 Lys Leu Thr Glu Asp Lys Lys Glu Gly Leu Arg Gln Leu Val Met Thr
84 135                 140                 145                 150
86 ttt caa cat ttc atg aga gaa gaa ata cag gat gcc tct cag ctg cca      593
87 Phe Gln His Phe Met Arg Glu Glu Ile Gln Asp Ala Ser Gln Leu Pro
88                  155                 160                 165
90 cct gcc ttt gac ctt ttt gaa gcc ttt gca aaa gtg atc tgc aac tct      641
91 Pro Ala Phe Asp Leu Phe Glu Ala Phe Ala Lys Val Ile Cys Asn Ser
92              170                 175                 180
94 ttc acc atc tgt aat gcg gag atg cag gaa gtt ggt gtt ggc cta tat      689
95 Phe Thr Ile Cys Asn Ala Glu Met Gln Glu Val Gly Val Gly Leu Tyr
96          185                 190                 195
98 ccc agt atc tct ttg ctc aat cac agc tgt gac ccc aac tgt tcg att      737
99 Pro Ser Ile Ser Leu Leu Asn His Ser Cys Asp Pro Asn Cys Ser Ile
100     200                 205                 210
102 gtg ttc aat ggg ccc cac ctc tta ctg cga gca gtc cga gac atc gag      785
103 Val Phe Asn Gly Pro His Leu Leu Leu Arg Ala Val Arg Asp Ile Glu
104 215                 220                 225                 230
106 gtg gga gag gag ctc acc atc tgc tac ctg gat atg ctg atg acc agt      833
107 Val Gly Glu Glu Leu Thr Ile Cys Tyr Leu Asp Met Leu Met Thr Ser
108                 235                 240                 245
110 gag gag cgc cgg aag cag ctg agg gac cag tac tgc ttt gaa tgt gac      881
111 Glu Glu Arg Arg Lys Gln Leu Arg Asp Gln Tyr Cys Phe Glu Cys Asp
112             250                 255                 260
114 tgt ttc cgt tgc caa acc cag gac aag gat gct gat atg cta act ggt      929
115 Cys Phe Arg Cys Gln Thr Gln Asp Lys Asp Ala Asp Met Leu Thr Gly
116         265                 270                 275
118 gat gag caa gta tgg aag gaa gtt caa gaa tcc ctg aaa aaa att gaa      977
119 Asp Glu Gln Val Trp Lys Glu Val Gln Glu Ser Leu Lys Lys Ile Glu
120     280                 285                 290
122 gaa ctg aag gca cac tgg aag tgg gag cag gtt ctg gcc atg tgc cag     1025
123 Glu Leu Lys Ala His Trp Lys Trp Glu Gln Val Leu Ala Met Cys Gln
124 295                 300                 305                 310
126 gcg atc ata agc agc aat tct gaa cgg ctt ccc gat atc aac atc tac     1073
127 Ala Ile Ile Ser Ser Asn Ser Glu Arg Leu Pro Asp Ile Asn Ile Tyr
128                 315                 320                 325
130 cag ctg aag gtg ctc gac tgc gcc atg gat gcc tgc atc aac ctc ggc     1121
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RAW SEQUENCE LISTING DATE: 12/13/2006
PATENT APPLICATION: **US/10/788,847A** TIME: 16:15:05

Input Set : **A:\pto.kd.txt**
Output Set: **N:\CRF4\12132006\J788847A.raw**

```
131 Gln Leu Lys Val Leu Asp Cys Ala Met Asp Ala Cys Ile Asn Leu Gly
132             330                 335                 340
134 ctg ttg gag gaa gcc ttg ttc tat ggt act cgg acc atg gag cca tac     1169
135 Leu Leu Glu Glu Ala Leu Phe Tyr Gly Thr Arg Thr Met Glu Pro Tyr
136         345                 350                 355
138 agg att ttt ttc cca gga agc cat ccc gtc aga ggg gtt caa gtg atg     1217
139 Arg Ile Phe Phe Pro Gly Ser His Pro Val Arg Gly Val Gln Val Met
140     360                 365                 370
142 aaa gtt ggc aaa ctg cag cta cat caa ggc atg ttt ccc caa gca atg     1265
143 Lys Val Gly Lys Leu Gln Leu His Gln Gly Met Phe Pro Gln Ala Met
144 375                 380                 385                 390
146 aag aat ctg aga ctg gct ttt gat att atg aga gtg aca cat ggc aga     1313
147 Lys Asn Leu Arg Leu Ala Phe Asp Ile Met Arg Val Thr His Gly Arg
148                 395                 400                 405
150 gaa cac agc ctg att gaa gat ttg att cta ctt tta gaa gaa tgc gac     1361
151 Glu His Ser Leu Ile Glu Asp Leu Ile Leu Leu Leu Glu Glu Cys Asp
152             410                 415                 420
154 gcc aac atc aga gca tcc taa gggaacgcag tcagagggaa atacggcgtg        1412
155 Ala Asn Ile Arg Ala Ser
156         425
158 tgtctttgtt gaatgcctta ttgaggtcac acactctatg ctttgttagc tgtgtgaacc   1472
160 tctcttattg gaaattctgt tccgtgtttg tgtaggtaaa taaaggcaga catggtttgc   1532
162 aaaccacaag aatcattagt tgtagagaag cacgattata ataaattcaa aacatttggt   1592
164 tgaggatgcc aaaaaaaaaa aaaaaaaaaa                                   1622
167 <210> SEQ ID NO: 2
168 <211> LENGTH: 428
169 <212> TYPE: PRT
170 <213> ORGANISM: Homo sapiens
172 <400> SEQUENCE: 2
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175 1               5                   10                  15
178 Gly Leu Arg Ala Val Thr Pro Leu Arg Pro Gly Glu Leu Leu Phe Arg
179             20                  25                  30
182 Ser Asp Pro Leu Ala Tyr Thr Val Cys Lys Gly Ser Arg Gly Val Val
183         35                  40                  45
186 Cys Asp Arg Cys Leu Leu Gly Lys Glu Lys Leu Met Arg Cys Ser Gln
187     50                  55                  60
190 Cys Arg Val Ala Lys Tyr Cys Ser Ala Lys Cys Gln Lys Lys Ala Trp
191 65                  70                  75                  80
194 Pro Asp His Lys Arg Glu Cys Lys Cys Leu Lys Ser Cys Lys Pro Arg
195                 85                  90                  95
198 Tyr Pro Pro Asp Ser Val Arg Leu Leu Gly Arg Val Val Phe Lys Leu
199             100                 105                 110
202 Met Asp Gly Ala Pro Ser Glu Ser Glu Lys Leu Tyr Ser Phe Tyr Asp
203         115                 120                 125
206 Leu Glu Ser Asn Ile Asn Lys Leu Thr Glu Asp Lys Lys Glu Gly Leu
207     130                 135                 140
210 Arg Gln Leu Val Met Thr Phe Gln His Phe Met Arg Glu Glu Ile Gln
211 145                 150                 155                 160
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RAW SEQUENCE LISTING DATE: 12/13/2006
PATENT APPLICATION: US/10/788,847A TIME: 16:15:05

Input Set : A:\pto.kd.txt
Output Set: N:\CRF4\12132006\J788847A.raw

214 Asp Ala Ser Gln Leu Pro Pro Ala Phe Asp Leu Phe Glu Ala Phe Ala
215 165 170 175
218 Lys Val Ile Cys Asn Ser Phe Thr Ile Cys Asn Ala Glu Met Gln Glu
219 180 185 190
222 Val Gly Val Gly Leu Tyr Pro Ser Ile Ser Leu Leu Asn His Ser Cys
223 195 200 205
226 Asp Pro Asn Cys Ser Ile Val Phe Asn Gly Pro His Leu Leu Leu Arg
227 210 215 220
230 Ala Val Arg Asp Ile Glu Val Gly Glu Glu Leu Thr Ile Cys Tyr Leu
231 225 230 235 240
234 Asp Met Leu Met Thr Ser Glu Glu Arg Arg Lys Gln Leu Arg Asp Gln
235 245 250 255
238 Tyr Cys Phe Glu Cys Asp Cys Phe Arg Cys Gln Thr Gln Asp Lys Asp
239 260 265 270
242 Ala Asp Met Leu Thr Gly Asp Glu Gln Val Trp Lys Glu Val Gln Glu
243 275 280 285
246 Ser Leu Lys Lys Ile Glu Glu Leu Lys Ala His Trp Lys Trp Glu Gln
247 290 295 300
250 Val Leu Ala Met Cys Gln Ala Ile Ile Ser Ser Asn Ser Glu Arg Leu
251 305 310 315 320
254 Pro Asp Ile Asn Ile Tyr Gln Leu Lys Val Leu Asp Cys Ala Met Asp
255 325 330 335
258 Ala Cys Ile Asn Leu Gly Leu Leu Glu Glu Ala Leu Phe Tyr Gly Thr
259 340 345 350
262 Arg Thr Met Glu Pro Tyr Arg Ile Phe Phe Pro Gly Ser His Pro Val
263 355 360 365
266 Arg Gly Val Gln Val Met Lys Val Gly Lys Leu Gln Leu His Gln Gly
267 370 375 380
270 Met Phe Pro Gln Ala Met Lys Asn Leu Arg Leu Ala Phe Asp Ile Met
271 385 390 395 400
274 Arg Val Thr His Gly Arg Glu His Ser Leu Ile Glu Asp Leu Ile Leu
275 405 410 415
278 Leu Leu Glu Glu Cys Asp Ala Asn Ile Arg Ala Ser
279 420 425
282 <210> SEQ ID NO: 3
283 <211> LENGTH: 55
284 <212> TYPE: DNA
285 <213> ORGANISM: Artificial Sequence
287 <220> FEATURE:
288 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
290 <400> SEQUENCE: 3
291 caccaaactt atggatggag cacctttcaa gagaaggtgc tccatccata agttt 55
294 <210> SEQ ID NO: 4
295 <211> LENGTH: 55
296 <212> TYPE: DNA
297 <213> ORGANISM: Artificial Sequence
299 <220> FEATURE:
300 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
302 <400> SEQUENCE: 4

RAW SEQUENCE LISTING DATE: 12/13/2006
PATENT APPLICATION: **US/10/788,847A** TIME: 16:15:05

Input Set : **A:\pto.kd.txt**
Output Set: **N:\CRF4\12132006\J788847A.raw**

303 aaaaaaactt atggatggag caccttctct tgaaaggtgc tccatccata agttt 55
306 <210> SEQ ID NO: 5
307 <211> LENGTH: 55
308 <212> TYPE: DNA
309 <213> ORGANISM: Artificial Sequence
311 <220> FEATURE:
312 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
314 <400> SEQUENCE: 5
315 caccaatcag agaagcttta ctcatttcaa gagaatgagt aaagcttata tgatt 55
318 <210> SEQ ID NO: 6
319 <211> LENGTH: 55
320 <212> TYPE: DNA
321 <213> ORGANISM: Artificial Sequence
323 <220> FEATURE:
324 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
326 <400> SEQUENCE: 6
327 aaaaaatcag agaagcttta ctcattctct tgaaatgagt aaagcttata tgatt 55
330 <210> SEQ ID NO: 7
331 <211> LENGTH: 55
332 <212> TYPE: DNA
333 <213> ORGANISM: Artificial Sequence
335 <220> FEATURE:
336 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
338 <400> SEQUENCE: 7
339 caccaacaaa ctgactgaag ataagttcaa gagaaggtgc tccatccata agttt 55
342 <210> SEQ ID NO: 8
343 <211> LENGTH: 55
344 <212> TYPE: DNA
345 <213> ORGANISM: Artificial Sequence
347 <220> FEATURE:
348 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
350 <400> SEQUENCE: 8
351 aaaaaacaaa ctgactgaag ataagtctct tgaaaggtgc tccatccata agttt 55
354 <210> SEQ ID NO: 9
355 <211> LENGTH: 55
356 <212> TYPE: DNA
357 <213> ORGANISM: Artificial Sequence
359 <220> FEATURE:
360 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
362 <400> SEQUENCE: 9
363 caccaactcg taatgacatt tcaacttcaa gagagttgaa atgtcattac gagtt 55
366 <210> SEQ ID NO: 10
367 <211> LENGTH: 55
368 <212> TYPE: DNA
369 <213> ORGANISM: Artificial Sequence
371 <220> FEATURE:
372 <223> OTHER INFORMATION: An Artificially Synthesized siRNA Sequence
374 <400> SEQUENCE: 10
375 aaaaaactcg taatgacatt tcaactctct tgaagttgaa atgtcattac gagtt 55

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 12/13/2006
PATENT APPLICATION: **US/10/788,847A** TIME: 16:15:06

Input Set : **A:\pto.kd.txt**
Output Set: **N:\CRF4\12132006\J788847A.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:37; N Pos. 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40
Seq#:44; N Pos. 485,486,487,488,489

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:80

VERIFICATION SUMMARY DATE: 12/13/2006
PATENT APPLICATION: **US/10/788,847A** TIME: 16:15:06

Input Set : **A:\pto.kd.txt**
Output Set: **N:\CRF4\12132006\J788847A.raw**

L:705 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
L:813 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:480

Raw Sequence Listing before editing (for reference only)

IFWO

RAW SEQUENCE LISTING DATE: 12/08/2006
PATENT APPLICATION: **US/10/788,847A** TIME: 14:46:51

Input Set : **A:\25371-021CIP Sequence Listing.txt**
Output Set: **N:\CRF4\12082006\J788847A.raw**

3 <110> APPLICANT: Nakamura, Yusuke
4 Furukawa, Yoichi
6 <120> TITLE OF INVENTION: Gene and Protein Relating to Hepatocellular Carcinoma and Methods
7 of Use Thereof
9 <130> FILE REFERENCE: 25371-021 CIP
11 <140> CURRENT APPLICATION NUMBER: US 10/788,847A
12 <141> CURRENT FILING DATE: 2004-02-27
14 <150> PRIOR APPLICATION NUMBER: PCT/JP02/09876
15 <151> PRIOR FILING DATE: 2002-09-25
17 <150> PRIOR APPLICATION NUMBER: US 60/324,261
18 <151> PRIOR FILING DATE: 2001-09-25
20 <150> PRIOR APPLICATION NUMBER: US 60/391,666
21 <151> PRIOR FILING DATE: 2002-06-26
23 <150> PRIOR APPLICATION NUMBER: CASN 2,399,569
24 <151> PRIOR FILING DATE: 2002-08-23
26 <150> PRIOR APPLICATION NUMBER: 60/450,644
27 <151> PRIOR FILING DATE: 2003-02-28
29 <160> NUMBER OF SEQ ID NOS: 83
31 <170> SOFTWARE: PatentIn version 3.2

Does Not Comply
Corrected Diskette Needed
(pg. 1)

ERRORED SEQUENCES

1623 <210> SEQ ID NO: 83
1624 <211> LENGTH: 30
1625 <212> TYPE: DNA
1626 <213> ORGANISM: Artificial Sequence
1628 <220> FEATURE:
1629 <223> OTHER INFORMATION: An Artificially Synthesized Oligonucleotide Sequence
1631 <400> SEQUENCE: 83
1632 gcgggaggat ggagccgctg aaggtggaaa 30
E--> 1638 1

deleted

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 12/08/2006
PATENT APPLICATION: **US/10/788,847A** TIME: 14:46:52

Input Set : **A:\25371-021CIP Sequence Listing.txt**
Output Set: **N:\CRF4\12082006\J788847A.raw**

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:80

VERIFICATION SUMMARY DATE: 12/08/2006
PATENT APPLICATION: **US/10/788,847A** TIME: 14:46:52

Input Set : **A:\25371-021CIP Sequence Listing.txt**
Output Set: **N:\CRF4\12082006\J788847A.raw**

L:705 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
L:813 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:480
L:1638 M:254 E: No. of Bases conflict, this line has no nucleotides.